

Issuance Date: April 27, 2004
Effective Date: June 1, 2004
Expiration Date: May 31, 2009

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTE DISCHARGE PERMIT No. WA-0001317

State of Washington
DEPARTMENT OF ECOLOGY
Olympia, Washington 98504-7600

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington
and
The Federal Water Pollution Control Act
(The Clean Water Act)
Title 33 United States Code, Section 1251 et seq.

Teck Cominco American Incorporated

Pend Oreille Mine
P.O. Box 7
Metaline Falls, WA 99153

<u>Facility Location:</u> 1382 Pend Oreille Mine Road	<u>Receiving Water:</u> Pend Oreille River
<u>Water Body I.D. No.:</u> WA 62-1010	<u>Mine Water Discharge Location:</u> Latitude: 48° 53' 15" N Longitude: 117° 21' 30" W
<u>Industry Type:</u> Lead and Zinc Mining and Milling	<u>Mill Tailings Discharge Location:</u> approximately 84 acres within Section 15, Township 39 N., Range 43 E., W.M., Pend Oreille County

is authorized to discharge in accordance with the special and general conditions which follow.

James M. Bellatty
Water Quality Section Manager
Eastern Regional Office

TABLE OF CONTENTS

SUMMARY OF PERMIT REPORT SUBMITTALS.....	4
SPECIAL CONDITIONS	
S1. DISCHARGE LIMITATIONS.....	6
A. Process Wastewater Discharges	
1. Mine Water Discharge	
2. Mill Tailings Discharge	
3. Leachate Collection Recovery System (LCRS) Water	
B. Mixing Zone Descriptions	
S2. MONITORING REQUIREMENTS.....	7
A. Monitoring Schedule	
B. Sampling and Analytical Procedures	
C. Flow Measurement	
D. Laboratory Accreditation	
S3. REPORTING AND RECORDKEEPING REQUIREMENTS	11
A. Reporting	
B. Records Retention	
C. Recording of Results	
D. Additional Monitoring by the Permittee	
E. Noncompliance Notification	
F. Maintaining a Copy of This Permit	
S4. OPERATION AND MAINTENANCE.....	13
A. Operations and Maintenance Manual	
B. Bypass Procedures	
C. Duty to Mitigate	
S5. TAILINGS DISPOSAL FACILITY LEAKAGE RATE CRITERIA.....	16
S6. SURFACE AND GROUND WATER MONITORING.....	16
S7. ANNUAL REPORTING	17
A. Tailings Disposal Facility Annual Report	
B. Waste Rock Management Plan Annual Report	
S8. RECLAMATION REQUIREMENTS.....	18
S9. SOLID WASTE DISPOSAL.....	19
A. Solid Waste Handling	
B. Leachate	
C. Solid Waste Control Plan	
S10. EFFLUENT METALS REDUCTION STUDY	20
S11. EFFLUENT TEMPERATURE CONTROL STUDY	20

S13.	NON-ROUTINE AND UNANTICIPATED DISCHARGES	20
S14.	SPILL PLAN	21
S15.	SEDIMENT MONITORING.....	22
A.	Sediment Sampling and Analysis Plan	
B.	Sediment Data Report	
S16.	ACUTE TOXICITY	22
A.	Effluent Characterization	
B.	Effluent Limit for Acute Toxicity	
C.	Monitoring for Compliance With an Effluent Limit for Acute Toxicity	
D.	Response to Noncompliance With an Effluent Limit for Acute Toxicity	
E.	Monitoring When There Is No Permit Limit for Acute Toxicity	
F.	Sampling and Reporting Requirements	
S17.	CHRONIC TOXICITY	26
A.	Effluent Characterization	
B.	Effluent Limit for Chronic Toxicity	
C.	Monitoring for Compliance With an Effluent Limit for Chronic Toxicity	
D.	Response to Noncompliance With an Effluent Limit for Chronic Toxicity	
E.	Monitoring When There Is No Permit Limit for Chronic Toxicity	
F.	Sampling and Reporting Requirements	
GENERAL CONDITIONS		
G1.	SIGNATORY REQUIREMENTS.....	30
G2.	RIGHT OF INSPECTION AND ENTRY	30
G3.	PERMIT ACTIONS.....	31
G4.	REPORTING PLANNED CHANGES.....	32
G5.	PLAN REVIEW REQUIRED	32
G6.	COMPLIANCE WITH OTHER LAWS AND STATUTES	33
G7.	DUTY TO REAPPLY	33
G8.	TRANSFER OF THIS PERMIT	33
G9.	REDUCED PRODUCTION FOR COMPLIANCE	33
G10.	REMOVED SUBSTANCES	34
G11.	DUTY TO PROVIDE INFORMATION.....	34
G12.	OTHER REQUIREMENTS OF 40 CFR.....	34
G13.	ADDITIONAL MONITORING	34
G14.	PAYMENT OF FEES.....	34
G15.	PENALTIES FOR VIOLATING PERMIT CONDITIONS	34
G16.	UPSET	34
G17.	PROPERTY RIGHTS.....	35
G18.	DUTY TO COMPLY	35
G19.	TOXIC POLLUTANTS.....	35
G20.	PENALTIES FOR TAMPERING	35
G21.	REPORTING ANTICIPATED NON-COMPLIANCE.....	35
G22.	REPORTING OTHER INFORMATION.....	36
G23.	REPORTING REQUIREMENTS APPLICABLE TO EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURAL DISCHARGERS.....	36
G24.	COMPLIANCE SCHEDULES	36

SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions of this permit for additional submittal requirements.

Permit Section	Submittal	Frequency	First Submittal Date
S3.A	Discharge Monitoring Report	Monthly	July 25, 2004
S3.E	Noncompliance Notification	As necessary	-
S4.A	Operations and Maintenance Manual	-	March 1, 2005
S4.A	Operations and Maintenance Manual Update or Review Confirmation Letter	Annually	-
S4.A	Treatment System Operating Plan	-	March 1, 2005
S4.B	Reporting Bypasses	As necessary	
S6.	Surface and Ground Water Monitoring Plan	-	December 1, 2004
S7.	Tailings Disposal Facility Annual Summary Report	-	April 25, 2005
S9.C	Solid Waste Control Plan	1/permit cycle	June 1, 2005
S9.C	Modification to Solid Waste Plan	As necessary	-
S10.	Effluent Metals Reduction Study	-	June 1, 2005
S11.	Effluent Temperature Control Study	-	December 1, 2005
S14.	Spill Plan	updates submitted as necessary	December 1, 2004
S15.A	Sediment Sampling and Analysis Plan	1/permit cycle	June 1, 2006
S15.B	Sediment Data Report	1/permit cycle	June 1, 2007
S16.A	Acute Toxicity Characterization Data	Quarterly for one year	October 1, 2004 - Data Reports are due 60 days after each sampling event
S16.A	Acute Toxicity Tests Characterization Summary Report	1/permit cycle	90 days following the last characterization sampling event
S16.C	Acute Toxicity Compliance Monitoring Reports	1/quarter	As necessary
S16.D	Acute Toxicity: "Causes and Preventative Measures for Transient Events."	As necessary	-
S16.D	Acute Toxicity TI/TRE Plan	As necessary	-
S16.E	Acute Toxicity Effluent Characterization with Permit Renewal Application	2/permit cycle	Once in the Last Summer & Once in the Last Winter Prior to Submission of the Renewal Application

Permit Section	Submittal	Frequency	First Submittal Date
S17.A	Chronic Toxicity Characterization Data	Biannually for one year	October 1, 2004 - Data Reports are due 60 days after each sampling event
S17.A	Chronic Toxicity Tests Characterization Summary Report	1/permit cycle	90 days following the last characterization sampling event
S17.C	Chronic Toxicity Compliance Monitoring Reports	2/year	As necessary
S17.D	Chronic Toxicity: "Causes and Preventative Measures for Transient Events."	As necessary	-
S17.D	Chronic Toxicity TI/TRE Plan	As necessary	-
S17.E	Chronic Toxicity Effluent Characterization with Permit Renewal Application	2/permit cycle	Once in the Last Summer & Once in the Last Winter Prior to Submission of the Renewal Application
G1.	Notice of Change in Authorization	As necessary	-
G4.	Permit Application for Substantive Changes to the Discharge	As necessary	-
G5.	Engineering Report for Construction or Modification Activities	As necessary	-
G7.	Application for Permit Renewal	1/permit cycle	September 30, 2008
G8	Notice of Permit Transfer	As necessary	-
G21	Reporting Anticipated Non-compliance	As necessary	-
G22.	Reporting Other Information	As necessary	-

SPECIAL CONDITIONS

S1. DISCHARGE LIMITATIONS

A. Process Wastewater Discharges

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit.

The discharge of any of the following pollutants more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

1. Mine Water Discharge

Beginning on the effective date of this permit and lasting through the expiration date, the Permittee is authorized to discharge mine water from the underground workings at the permitted location subject to complying with the following limitations:

EFFLUENT LIMITATIONS: OUTFALL #001				
Parameter	Average Monthly ^a		Maximum Daily ^b	
Copper, total recoverable, µg/L	50		78	
Zinc, total recoverable, µg/L	444		890	
Lead, total, µg/L	200		400	
Mercury, total, µg/L	1		2	
Cadmium, total recoverable, µg/L	22.1		32.2	
Oil and Grease, mg/L	10		15	
TSS, mg/L	20		30	
pH ^c (s.u.)	Daily minimum is equal to or greater than 6.5 and the daily maximum is less than or equal to 8.5			
Parameter	INTERIM EFFLUENT LIMITATIONS		FINAL EFFLUENT LIMITATIONS	
	Average Monthly ^a	Maximum Daily ^b	Average Monthly ^a	Maximum Daily ^b
Temperature ^d , °F (°C)	70.6 (20.5)	72.2 (21.4)	-	-
^a The average monthly effluent limitation is defined as the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.				
^b The maximum daily effluent limitation is defined as the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For other units of measurement, the daily discharge is the average measurement of the pollutant over the day.				

^c Indicates the range of permitted values. When pH is continuously monitored, excursions between 5.5 and 6.5, or 8.5 and 9.5 shall not be considered violations provided no single excursion exceeds 60 minutes in length and total excursions do not exceed 7 hours and 30 minutes per month. Any excursions below 5.5 and above 9.5 are violations. The instantaneous maximum and minimum pH shall be reported monthly.

^d This limitation applies only during July through September. See Fact Sheet for the schedule of compliance for temperature. This limitation may also be modified based on any of the following: the completion of a temperature total daily maximum load (TMDL) for the Pend Oreille River; a change in the 303(d) temperature listing for the Pend Oreille River; or a change in the applicable water quality standard for temperature for the Pend Oreille River.

2. Mill Tailings Discharge

Beginning on the effective date of this permit and lasting through the expiration date, the Permittee is not authorized to discharge mill tailings/reclaim water from the tailings impoundment to either surface or ground waters of the State.

3. Leachate Collection Recovery System (LCRS) Water

Beginning on the effective date of this permit and lasting through the expiration date, the Permittee is not authorized to discharge water withdrawn from the leachate collection and recovery system (LCRS) sump to either surface or ground waters of the State.

B. Mixing Zone Descriptions

The maximum boundaries of the mixing zones are defined as follows:

Not extend in a downstream direction for a distance from the discharge point greater than three hundred feet, or extend upstream for a distance of over one hundred feet (dilution factor of 104.2; chronic critical effluent concentration (CCEC) of 0.96% effluent). A zone where acute criteria may be exceeded shall not extend in a downstream direction for a distance from the discharge point greater than 30 feet, or extend upstream for a distance of over 10 feet (dilution factor of 10.5; acute critical effluent concentration (ACEC) of 9.5% effluent).

S2. MONITORING REQUIREMENTS

The Permittee shall monitor in accordance with the following schedule:

A. Monitoring Schedule

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Mine Water	Flow	mgd	Outfall 001	Once/day	Continuous
"	Conductivity	µmhos/cm	"	Once/week	Grab
"	Temperature	°F	"	"	"

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Mine Water	pH	s.u.	"	"	"
"	TSS	mg/l	"	"	"
"	Oil & Grease	mg/l	"	"	"
"	Zinc ^a	µg/L	"	"	"
"	Total Lead	µg/L	"	"	"
"	Copper ^a	µg/L	"	Once/month	"
"	Total Arsenic	µg/L	"	"	"
"	Uranium	mg/L	"	"	"
"	Turbidity	NTU	"	Once/quarter ^d	"
"	Cadmium ^a	µg/L	"	"	"
"	Total Mercury	µg/L	"	"	"
"	Ammonia (as N)	mg/L	"	"	"
"	Nitrate (as N)	mg/L	"	"	"
"	Hardness	mg/L as CaCO ₃	"	"	"
"	Cyanide	mg/L	"	"	"
"	Radium (226+228)	pCi/L	"	"	"
"	Sulfate	mg/L	"	"	"
Tailings Water	Conductivity	µmhos/cm	Return Line	Once/quarter ^d	Grab
"	Temperature	°F	"	"	"
"	pH	s.u.	"	"	"
"	Total Dissolved Solids	mg/L	"	"	"
	Total Arsenic	µg/L			
"	Total Zinc	µg/L	"	"	"
"	Total Lead	µg/L	"	"	"
"	Total Copper	µg/L	"	"	"
"	Total Cadmium	µg/L	"	"	"
"	Total Mercury	µg/L	"	"	"
"	Ammonia (as N)	mg/L	"	"	"

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Tailings Water	Nitrate (as N)	"	"	"	"
"	Cyanide	"	"	"	"
"	Calcium	"	"	"	"
"	Magnesium	"	"	"	"
"	Potassium	"	"	"	"
"	Total Alkalinity	"	"	"	"
"	Carbonate	"	"	"	"
"	Bicarbonate	"	"	"	"
"	Chloride	"	"	"	"
"	Sulfate	"	"	"	"
"	Uranium	"	"	"	"
"	Radium (226+228)	pCi/L	"	"	"
Leakage from Tailings Impoundment ^b	Liquid Level	feet	LCRS Piezometers	Once/week	Reading
"	Flow	gpm (daily average)	LCRS Pump	Once/day ^c	Meter Reading
"	Conductivity	µmhos/cm	LCRS Sump	Once/quarter ^d	Grab
"	Temperature	°F	"	"	"
"	pH	s.u.	"	"	"
"	Total Dissolved Solids	mg/L	"	"	"
	Total Arsenic	µg/L			
"	Total Zinc	µg/L	"	"	"
"	Total Lead	µg/L	"	"	"
"	Total Copper	µg/L	"	"	"
"	Total Cadmium	µg/L	"	"	"
"	Total Mercury	µg/L	"	"	"
"	Ammonia (as N)	mg/L	"	"	"
"	Nitrate (as N)	"	"	"	"
"	Cyanide	"	"	"	"

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Leakage from Tailings Impoundment ^b	Calcium	"	"	"	"
"	Magnesium	"	"	"	"
"	Potassium	"	"	"	"
"	Total Alkalinity	"	"	"	"
"	Carbonate	"	"	"	"
"	Bicarbonate	"	"	"	"
"	Chloride	"	"	"	"
"	Sulfate	"	"	"	"
"	Uranium	"	"	"	"
"	Radium (226+228)	pCi/L	"	"	"
Surface and Ground Water Monitoring	As specified in section S6.				
Mine Water	Acute Toxicity Testing	See S16	Outfall 001	Once/quarter ^d	Grab
"	Chronic Toxicity Testing	See S17	"	Twice/year ^e	"

*Continuous means uninterrupted - except for brief lengths of time for calibration, power failure, or for unanticipated equipment repair or maintenance. Sampling shall be taken once/day when continuous monitoring is not possible.

^aTotal recoverable metals shall be tested.

^bWater quality monitoring shall be conducted if there is sufficient quantities of water for sampling. If there was no water pumped from the LCRS sump during the entire quarter, the discharge monitoring report shall state 'sump dry'.

^cThe LCRS pump shall be operated on a daily basis. If the average daily flow from the sump is less than 5 gpm for three (3) consecutive months, the pump operating frequency may be reduced to once per week. If any subsequent daily average flow rate is greater than 5 gpm, the pump operating frequency shall return to once per day.

^dQuarters are defined as follows: 1st - January to March; 2nd - April to June; 3rd - July to September; 4th - October to December.

^eOne sample shall be taken for the 1st half of the year (January to June) and the second sample shall be taken in the last half of the year (July to December).

B. Sampling and Analytical Procedures

Samples and measurements taken to meet the requirements of this permit shall be representative of the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality.

Sampling and analytical methods used to meet the monitoring requirements specified in this permit shall conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136 or to the latest revision of *Standard Methods for the Examination of Water and Wastewater* (APHA), unless otherwise specified in this permit or approved in writing by the Department of Ecology (Department).

C. Flow Measurement

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the quantity of monitored flows. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements are consistent with the accepted industry standard for that type of device. Frequency of calibration shall be in conformance with manufacturer's recommendations and at a minimum frequency of at least one calibration per year. Calibration records shall be maintained for at least three years.

D. Laboratory Accreditation

All monitoring data required by the Department shall be prepared by a laboratory registered or accredited under the provisions of, *Accreditation of Environmental Laboratories*, Chapter 173-50 WAC. Flow, temperature, settleable solids, conductivity, pH, turbidity, and internal process control parameters are exempt from this requirement. Conductivity and pH shall be accredited if the laboratory must otherwise be registered or accredited. The Department exempts crops, soils, and hazardous waste data from this requirement pending accreditation of laboratories for analysis of these media.

S3. REPORTING AND RECORDKEEPING REQUIREMENTS

The Permittee shall monitor and report in accordance with the following conditions. The falsification of information submitted to the Department shall constitute a violation of the terms and conditions of this permit.

A. Reporting

The first monitoring period begins on the effective date of the permit. Monitoring results shall be submitted monthly. Monitoring data obtained during each monitoring period shall be summarized, reported, and submitted on a Discharge Monitoring Report (DMR) form provided, or otherwise approved, by the Department. DMR forms shall be received no later than the 25th day of the month following the completed monitoring period, unless otherwise specified in this permit. Priority pollutant analysis data shall

be submitted no later than forty-five (45) days following the monitoring period. Unless otherwise specified, all toxicity test data shall be submitted within sixty (60) days after the sample date. The report(s) shall be sent to the Department of Ecology, Eastern Regional Office, N. 4601 Monroe, Spokane, Washington 99205-1295.

All laboratory reports providing data for organic and metal parameters shall include the following information: sampling date, sample location, date of analysis, parameter name, CAS number, analytical method/ number, method detection limit (MDL), laboratory practical quantification limit (PQL), reporting units, and concentration detected.

Discharge Monitoring Report forms must be submitted monthly whether or not the facility was discharging. If there was no discharge during a given monitoring period, submit the form as required with the words "no discharge" entered in place of the monitoring results.

B. Records Retention

The Permittee shall retain records of all monitoring information for a minimum of three (3) years. Such information shall include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by the Director.

C. Recording of Results

For each measurement or sample taken, the Permittee shall record the following information: (1) the date, exact place, method, and time of sampling or measurement; (2) the individual who performed the sampling or measurement; (3) the dates the analyses were performed; (4) the individual who performed the analyses; (5) the analytical techniques or methods used; and (6) the results of all analyses.

D. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit using test procedures specified by Condition S2. of this permit, then the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Permittee's DMR.

E. Noncompliance Notification

In the event the Permittee is unable to comply with any of the terms and conditions of this permit due to any cause, the Permittee shall:

1. Immediately take action to stop, contain, and clean up unauthorized discharges or otherwise stop the noncompliance, correct the problem and, if applicable, repeat sampling and analysis of any noncompliance immediately and submit the results to the Department within thirty (30) days after becoming aware of the violation.

2. Immediately notify the Department of the failure to comply.
3. Submit a detailed written report to the Department within thirty (30) days (five [5] days for upsets and bypasses), unless requested earlier by the Department. The report shall contain a description of the noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

F. Maintaining a Copy of This Permit

A copy of this permit must be kept at the facility and be made available upon request to Ecology inspectors.

S4. OPERATION AND MAINTENANCE

The Permittee shall, at all times, properly operate and maintain all facilities or systems of treatment and control (and related appurtenances) which are installed to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

A. Operations and Maintenance Manual

An updated Operation and Maintenance (O&M) Manual shall be submitted to the Department for approval by March 1, 2005. It shall conform to the requirements of WAC 173-240-150. In addition to the requirements of WAC 173-240-150(1) and (2), the O&M Manual shall include:

1. Emergency procedures for mill shutdown and/or cleanup in event of tailings piping, return pipeline, underground mine water pipeline, or tailings facility upset or failure.
2. Maintenance and monitoring procedures for the tailings pipeline system, tailings impoundment, underground mine water pumping and mine water treatment system.
3. The mine water treatment system process control monitoring schedule.
4. Ground Water Response Action Plan.
5. Emergency Action Plan for LCRS Leakage.

The O&M Manual shall be reviewed by the Permittee at least annually and the Permittee shall confirm this review by letter to the Department. Substantial changes or updates to the O&M Manual shall be submitted to the Department for review and approval whenever they are incorporated into the manual.

The approved Operations and Maintenance Manual shall be kept available at the permitted facility and all operators are responsible for being familiar with, and using, this manual.

A Treatment System Operating Plan (TSOP) shall be submitted to the Department as the initial chapter of the updated O&M Manual. This chapter shall be entitled the "Treatment System Operating Plan." For the purposes of this NPDES permit, a TSOP is a concise summary of specifically defined elements of the O&M Manual. The TSOP shall not conflict with the O&M Manual and shall include the following information:

1. A baseline operating condition, which describes the operating parameters and procedures, used to meet the effluent limitations of S1.
2. The plan shall describe the operating procedures and conditions needed to maintain design treatment efficiency. The monitoring and reporting shall be described in the plan.
3. In the event of an upset, due to plant maintenance activities, start ups or shut downs, or other causes, the plan shall describe the operating procedures and conditions employed to mitigate the upset. The monitoring and reporting shall be described in the plan.
4. A description of any regularly scheduled maintenance or repair activities at the facility which would affect the volume or character of the wastes discharged to the mine water treatment system and a plan for monitoring and treating/controlling the discharge of maintenance-related materials (such as cleaners, degreasers, solvents, etc.).

An updated Treatment System Operating Plan (TSOP) shall be submitted to the Department with the application for renewal 180 days prior to expiration of the permit. This plan shall be updated and submitted, as necessary, to include requirements for any major modifications of the treatment system.

B. Bypass Procedures

Bypass, which is the intentional diversion of waste streams from any portion of a treatment facility, is prohibited, and the Department may take enforcement action against a Permittee for bypass unless one of the following circumstances (1, 2, or 3) is applicable.

1. Bypass for Essential Maintenance without the Potential to Cause Violation of Permit Limits or Conditions.

Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of this permit, or adversely impact public health as determined by the Department prior to the bypass.

The Permittee shall submit prior notice, if possible, at least ten (10) days before the date of the bypass.

2. Bypass Which is Unavoidable, Unanticipated, and Results in Noncompliance of this Permit.

This bypass is permitted only if:

- a. Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.
 - b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment downtime (but not if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance), or transport of untreated wastes to another treatment facility.
 - c. The Department is properly notified of the bypass as required in condition S3E of this permit.
3. Bypass which is Anticipated and has the Potential to Result in Noncompliance of this Permit.

The Permittee shall notify the Department at least thirty (30) days before the planned date of bypass. The notice shall contain (1) a description of the bypass and its cause; (2) an analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing; (3) a cost-effectiveness analysis of alternatives including comparative resource damage assessment; (4) the minimum and maximum duration of bypass under each alternative; (5) a recommendation as to the preferred alternative for conducting the bypass; (6) the projected date of bypass initiation; (7) a statement of compliance with SEPA; (8) a request for modification of water quality standards as provided for in WAC 173-201A-110, if an exceedance of any water quality standard is anticipated; and (9) steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

For probable construction bypasses, the need to bypass is to be identified as early in the planning process as possible. The analysis required above shall be considered during preparation of the engineering report or facilities plan and plans and specifications and shall be included to the extent practical. In cases where the probable need to bypass is determined early, continued analysis is necessary up to and including the construction period in an effort to minimize or eliminate the bypass.

The Department will consider the following prior to issuing an administrative order for this type bypass:

- a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.
- b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.
- c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, the Department will approve or deny the request. The public shall be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by the Department under RCW 90.48.120.

C. Duty to Mitigate

The Permittee is required to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

S5. TAILINGS DISPOSAL FACILITY LEAKAGE RATE CRITERIA

Leakage rate criteria from the LCRS shall be as follows:

Response Leakage Rate (base level):	5 gpm
Response Leakage Rate (level 2):	15 gpm
Action Leakage Rate (level 3):	25 gpm

Required actions taken as a result of exceedances of these leakage rates shall follow the Permittee's Emergency Action Plan for LCRS Leakage.

S6. SURFACE AND GROUND WATER MONITORING

By December 1, 2004, the Permittee shall submit to the Department an updated surface and ground water monitoring plan for Department review and approval. The plan, at a minimum shall include:

1. Surface and ground water monitoring locations, monitoring frequencies, and analytical parameters;
2. Protocols and procedures for surface and ground water monitoring sampling and testing (including monitoring equipment calibration procedures); and

3. Monitoring reporting forms.

Results from the surface and ground water monitoring shall be submitted quarterly. The monitoring results obtained during the previous three (3) months shall be reported and be received no later than the 25th day of the month following the completed reporting period, unless otherwise specified in this permit. The report shall be sent to the Department of Ecology, Eastern Regional Office, 4601 North Monroe Street, Washington, 99205-1295. In addition, by April 25th of every year, the previous calendar years worth of monitoring data shall be submitted in an electronic spreadsheet format acceptable to the Department.

All laboratory reports providing data for monitoring parameters shall include the following information: sampling date, sample location, date of analysis, parameter name, CAS number, analytical method/ number, method detection limit (MDL), laboratory practical quantification limit (PQL), reporting units, and concentration detected.

Any proposed revision to the surface and ground water monitoring plan shall be submitted for Department review and approval. Additionally, the Department may evaluate the monitoring data and require additional or different monitoring at any time.

S7. ANNUAL REPORTING

A. Tailings Disposal Facility Annual Report

By April 25th of every year, a report summarizing the previous years operation of the tailings facility shall be submitted for Department review. This report, at a minimum, shall include the following:

1. An estimation of the amount of tailings deposited in the impoundment and the remaining capacity.
2. A summary of LCRS piezometer readings, LCRS flow rates, and survey monument displacements. Any trends or anomalous results in these measurements shall be discussed.
3. Any items of concern noted and resulting actions taken based on routine inspections at the impoundment and ancillary facilities.
4. A summary of ground water monitoring data and analyses. Monitoring data shall be analyzed according to requirements in the Permittee's Ground Water Response Action Plan.

B. Waste Rock Management Plan Annual Report

By April 25th of every year, a report summarizing the previous years waste rock management measures shall be submitted for Department review. This report, at a minimum, shall include the following:

1. An estimated total volume of waste rock (non acid generating and potentially acid generating) produced during the previous calendar year, and the location where the material was deposited.

2. A summary of potentially acid generating classification testing of waste rock, including visual sulfide observations and paste pH determinations.
3. A summary of stopes identified as suitable for waste rock storage. This summary shall include the locations of the stopes, estimated storage volume, stope inspection results, and stopes identified as not suitable for waste rock storage. Any measures taken to make non suitable stopes into suitable for waste rock storage shall also be given.
4. A summary of confirmation testing for non suitable acid generating stopes to verify that proper storage methodology is maintained.
5. Monitoring results from pH testing for mine water collecting in internal sumps and flowing from stopes. Any measures taken to mitigate acid waters produced from stopes shall also be given.

S8. RECLAMATION REQUIREMENTS

1. The Permittee shall notify the Department in writing of all permanent or temporary closures of either the mine or the ore-processing facility. This notification shall be received by the Department at least sixty (60) calendar days prior to actual permanent or temporary closure. Sixty (60) calendar days prior to start-up of operations after any temporary closure, the Permittee shall notify the Department in writing of its intent to resume operations and describe the nature and extent of its planned renewed operations.

Permanent closure shall be defined as: (a) the Permittee's final shut-down of the mine or of the ore-processing facility such that no future mining or ore-processing activities are planned by the Permittee or its successors or related entities at the mine or the ore-processing facility other than final closure and reclamation, or (b) a temporary closure of any of the mine or of the ore-processing facility that has continued for seven (7) continuous years from the date that notice is required to be given to the Department under the immediately preceding paragraph.

Temporary closure shall be defined as any shut-down of the mine or of the ore-processing facility less than permanent closure, but does not include stoppages in the process flow due to maintenance, vacation, or exploration activity. Unless authorized in writing by the Department, a temporary closure may not continue for more than seven (7) years after the date that notification is required to be given to the Department, as described above, without being deemed a permanent closure and triggering the Permittee's obligation to carry out final reclamation as required under Special Condition S8.3. below.

2. During any temporary closure, the Permittee shall continue the complete surface and ground water quality monitoring as required in Special Condition S6.
3. Upon permanent closure of the mine and/or of the ore-processing facility, the Permittee shall expeditiously carry out the approved Reclamation Plan. Permanent closure of less than the entire project operation requires that the permittee proceed with that part of the Reclamation Plan applicable to the permanently closed operation(s).

4. The Permittee shall maintain with the Department a good and sufficient corporate surety bond or provide other security satisfactory to the Department (hereinafter referred to as "Bond"), which secures the full performance by the Permittee of all terms and conditions of the Reclamation Plan to be performed by the Permittee, including, but not limited to, the payment by the Permittee of all amounts now or hereafter due and payable to the Department. The Bond shall be in a form and issued by a surety company or bank acceptable to the Department. The amount of the Bond may be adjusted by the Department at permit renewal, provided, however, that in the event that a new or modified Bond may be required by the Department, it shall be delivered to the Department not less than thirty (30) calendar days following any adjustment by the Department of the amount of the Bond.
5. Upon any default by the Permittee in its obligations under the Reclamation Plan, any or all of the Bond may be appropriated by the Department to offset the liability of the Permittee to the Department, but such Bond and the Department's appropriation thereof or realization thereon shall in no way limit the liability or other security or obligations of the permittee or the rights or remedies of the Department nor shall such realization in any manner relieve the Permittee of its obligations under the Reclamation Plan. The Permittee's failure to have a Bond in force at all times during the term of the permit in the full amount as required by this section shall constitute a violation of the terms and conditions of this permit.
6. After any permanent closure, the Permittee shall continue surface water quality monitoring (Section S6) for two years after completion of final reclamation work is approved by the Department. The Department may evaluate the monitoring data and require additional monitoring or other actions by the Permittee to protect water quality.

S9. SOLID WASTE DISPOSAL

A. Solid Waste Handling

The Permittee shall handle and dispose of all solid waste material in such a manner as to prevent its entry into state ground or surface water.

B. Leachate

The Permittee shall not allow leachate from its solid waste material to enter state waters without providing all known, available and reasonable methods of treatment, nor allow such leachate to cause violations of the State Surface Water Quality Standards, Chapter 173-201A WAC, or the State Ground Water Quality Standards, Chapter 173-200 WAC. The Permittee shall apply for a permit or permit modification as may be required for such discharges to state ground or surface waters.

C. Solid Waste Control Plan

The Permittee shall submit a solid waste control plan to the Department by June 1, 2005. This plan shall include all solid wastes with the exception of those solid wastes regulated by Chapter 173-303 WAC (Dangerous Waste Regulations). The plan shall include at a minimum a description, source, generation rate, and disposal methods of these solid wastes. This plan shall not be at variance with any approved local solid

waste management plan. Any proposed revision or modification of the solid waste handling plan must be submitted to the Department. The Permittee shall comply with the plan and any modifications thereof. The Permittee shall submit an update of the solid waste control plan with the application for permit renewal 180 days prior to the expiration date of the permit.

S10. EFFLUENT METALS REDUCTION STUDY

The Permittee shall continue to operate the full scale sulfate reducing bacteria treatment system, unless written approval is received from the Department to discontinue the operation of this system.

By June 1, 2005, the Permittee shall prepare an engineering report updating and reevaluating all known, available, and reasonable methods of prevention, control and treatment (AKART) for sources contributing pollutants to the mine water discharge. The report shall include analysis of the ongoing sulfate reducing bacterial full scale pilot treatment system, as well as reduction of metals via direct chemical addition, precipitation, and solids settling

By June 1, 2006, the Permittee shall have implemented the AKART measures in the approved engineering report.

S11. EFFLUENT TEMPERATURE CONTROL STUDY

By December 1, 2005, the Permittee shall submit to the Department for review and approval an engineering report (per WAC 173-240) analyzing alternatives to reduce effluent temperature during the time from July through September. These alternatives may include, but are not limited to, treatment to reduce effluent temperature, source control measures, and diversion of effluent for use as irrigation water.

By June 1, 2006, the Permittee shall have implemented the temperature control alternatives in the approved engineering report.

S13. NON-ROUTINE AND UNANTICIPATED DISCHARGES

- A. Beginning on the effective date of this permit, the Permittee may discharge non-routine wastewater to surface waters of the State on a case-by-case basis if approved by the Department. Prior to any such discharge, the Permittee shall contact the Department and **at a minimum** provide the following information:
 1. The nature of the activity that is generating the discharge.
 2. Any alternatives to the discharge, such as reuse, storage, or recycling of the water.
 3. The total volume of water expected to be discharged.
 4. The results of the chemical analysis of the water. The water shall be analyzed for all constituents limited for the Permittee's discharge. The analysis shall also include hardness, any metals that are limited by water quality standards, and any

other parameter deemed necessary by the Department. All discharges must comply with the effluent limitations as established in Condition S1. of this permit, water quality standards, sediment management standards, and any other limitations imposed by the Department.

5. The date of proposed discharge and the rate at which the water will be discharged, in gallons per minute. The discharge rate shall be limited to that which will not cause erosion of ditches or structural damage to culverts and their entrances or exits.
 6. If the proposed discharge is to a municipal storm drain and is approved by the Department, the Permittee shall notify the municipality of the discharge.
- B. The discharge cannot proceed until the Department has reviewed the information provided and has authorized the discharge. Authorization from the Department will be by letter to the Permittee or by an Administrative Order.

S14. SPILL PLAN

December 1, 2004, the Permittee shall submit to the Department an update to the existing Spill Control Plan for the prevention, containment, and control of spills or unplanned discharges of: 1) oil and petroleum products, 2) materials, which when spilled, or otherwise released into the environment, are designated Dangerous (DW) or Extremely Hazardous Waste (EHW) by the procedures set forth in WAC 173-303-070, or 3) other materials (including explosives) which may become pollutants or cause pollution upon reaching state's waters. The Permittee shall review and update the Spill Plan, as needed, at least annually. Changes to the plan shall be sent to the Department. The plan and any supplements shall be followed throughout the term of the permit.

The updated spill control plan shall include the following:

- A description of operator training to implement the plan.
- A description of the reporting system which will be used to alert responsible managers and legal authorities in the event of a spill.
- A description of preventive measures and facilities (including an overall facility plot showing drainage patterns) which prevent, contain, or treat spills of these materials.
- A list of all oil, chemicals, and explosives used, processed, or stored at the facility which may be spilled into state waters.

For the purpose of meeting this requirement, plans and manuals, or portions thereof, required by 33 CFR 154, 40 CFR 109, 40 CFR 110, 40 CFR Part 112, the Federal Oil Pollution Act of 1990, Chapter 173-181, and contingency plans required by Chapter 173-303 WAC may be submitted.

S15. SEDIMENT MONITORING

A. Sediment Sampling and Analysis Plan

The Permittee shall submit to the Department for review and approval a Sediment Sampling and Analysis Plan for sediment monitoring by June 1, 2006. The purpose of the plan is to characterize sediment quality in the vicinity of the Permittee's discharge location (Outfall 001). The Permittee shall follow the guidance provided in the Sediment Source Control Standards User Manual, Appendix B: Sediment Sampling and Analysis Plan (Ecology, 1995).

B. Sediment Data Report

Following Department approval of the Sediment Sampling and Analysis Plan, sediments will be collected and analyzed. The Permittee shall submit to the Department a Sediment Data Report containing the results of the sediment sampling and analysis by June 1, 2007. The Sediment Data Report shall conform with the approved Sampling and Analysis Plan.

S16. ACUTE TOXICITY

A. Effluent Characterization

The Permittee shall conduct acute toxicity testing on the final effluent to determine the presence and amount of acute (lethal) toxicity. The two acute toxicity tests listed below shall be conducted on each sample taken for effluent characterization.

Effluent characterization for acute toxicity shall be conducted quarterly for one year. Acute toxicity testing shall follow protocols, monitoring requirements, and quality assurance/quality control procedures specified in this section. A dilution series consisting of a minimum of five concentrations and a control shall be used to estimate the concentration lethal to 50% of the organisms (LC₅₀). The percent survival in 100% effluent shall also be reported.

Testing shall begin by August 1, 2004. Acute toxicity tests shall be conducted with the following species and protocols:

1. Fathead minnow, *Pimephales promelas* (96 hour static-renewal test, method: EPA/600/4-90/027F).
2. Daphnid, *Ceriodaphnia dubia*, *Daphnia pulex*, or *Daphnia magna* (48 hour static test, method: EPA/600/4-90/027F). The Permittee shall choose one of the three species and use it consistently throughout effluent characterization.

B. Effluent Limit for Acute Toxicity

The Permittee has an effluent limit for acute toxicity if, after completing one year of effluent characterization, either:

1. The median survival of any species in 100% effluent is below 80%.

2. Any one test of any species exhibits less than 65% survival in 100% effluent.

If an effluent limit for acute toxicity is required by subsection B at the end of one year of effluent characterization, the Permittee shall immediately complete all applicable requirements in subsections C, D, and F.

If no effluent limit is required by subsection B at the end of one year of effluent characterization, then the Permittee shall complete all applicable requirements in subsections E and F.

The effluent limit for acute toxicity is no acute toxicity detected in a test concentration representing the acute critical effluent concentration (ACEC) equal to 9.5% effluent.

In the event of failure to pass the test described in subsection C. of this section for compliance with the effluent limit for acute toxicity, the Permittee is considered to be in compliance with all permit requirements for acute whole effluent toxicity as long as the requirements in subsection D. are being met to the satisfaction of the Department.

The ACEC means the maximum concentration of effluent during critical conditions at the boundary of the zone of acute criteria exceedance assigned pursuant to WAC 173-201A-100. The zone of acute criteria exceedance is authorized in Section S1.B of this permit. The ACEC equals 9.5% effluent.

C. Monitoring for Compliance With an Effluent Limit for Acute Toxicity

Monitoring to determine compliance with the effluent limit shall be conducted quarterly for the remainder of the permit term using each of the species listed in subsection A on a rotating basis and performed using at a minimum 100% effluent, the ACEC, and a control. The Permittee shall schedule the toxicity tests in the order listed in the permit unless the Department notifies the Permittee in writing of another species rotation schedule. The percent survival in 100% effluent shall be reported for all compliance monitoring.

Compliance with the effluent limit for acute toxicity means no statistically significant difference in survival between the control and the test concentration representing the ACEC. The Permittee shall immediately implement subsection D if any acute toxicity test conducted for compliance monitoring determines a statistically significant difference in survival between the control and the ACEC using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in survival between the control and the ACEC is less than 10%, the hypothesis test shall be conducted at the 0.01 level of significance.

D. Response to Noncompliance With an Effluent Limit for Acute Toxicity

If the Permittee violates the acute toxicity limit in subsection B, the Permittee shall begin additional compliance monitoring within one week from the time of receiving the test results. This additional monitoring shall be conducted weekly for four consecutive weeks using the same test and species as the failed compliance test. Testing shall

determine the LC₅₀ and effluent limit compliance. The discharger shall return to the original monitoring frequency in subsection C after completion of the additional compliance monitoring.

If the Permittee believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, the Permittee may notify the Department that the compliance test result might be anomalous and that the Permittee intends to take only one additional sample for toxicity testing and wait for notification from the Department before completing the additional monitoring required in this subsection. The notification to the Department shall accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The Permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by the Department that the compliance test result was not anomalous. If the one additional sample fails to comply with the effluent limit for acute toxicity, then the Permittee shall proceed without delay to complete all of the additional monitoring required in this subsection. The one additional test result shall replace the compliance test result upon determination by the Department that the compliance test result was anomalous.

If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the Permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to the Department on possible causes and preventive measures for the transient toxicity event which triggered the additional compliance monitoring.

If toxicity occurs in violation of the acute toxicity limit during the additional compliance monitoring, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department. The TI/RE plan submittal shall be within sixty (60) days after the sample date for the fourth additional compliance monitoring test. If the Permittee decides to forgo the rest of the additional compliance monitoring tests required in this subsection because one of the first three additional compliance monitoring tests failed to meet the acute toxicity limit, then the Permittee shall submit the TI/RE plan within sixty (60) days after the sample date for the first additional monitoring test to violate the acute toxicity limit. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).

E. Monitoring When There Is No Permit Limit for Acute Toxicity

The Permittee shall test final effluent once in the last summer and once in the last winter prior to submission of the application for permit renewal. All species used in the initial acute effluent characterization or substitutes approved by the Department shall be used, and results submitted to the Department as a part of the permit renewal application process.

F. Sampling and Reporting Requirements

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.
2. Testing shall be conducted on effluent grab samples. Composite samples taken for toxicity testing shall be cooled to 4 degrees Celsius while being collected and shall be sent to the lab immediately upon completion. Grab samples must be shipped on ice to the lab immediately upon collection. If a grab sample is received at the testing lab within one hour after collection, it must have a temperature below 20° C at receipt. If a grab sample is received at the testing lab within 4 hours after collection, it must be below 12° C at receipt. All other samples must be below 8° C at receipt. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended. The lab shall store all samples at 4° C in the dark from receipt until completion of the test.
3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version thereof.
4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in subsection A. and the Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.
5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in subsection A or pristine natural water of sufficient quality for good control performance.
6. The whole effluent toxicity tests shall be run on an unmodified sample of final effluent.
7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC.
8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing and do not comply with the acute statistical power standard of 29% as defined in WAC 173-205-020 must be repeated on a fresh sample with an increased number of replicates to increase the power.

S17. CHRONIC TOXICITY

A. Effluent Characterization

The Permittee shall conduct chronic toxicity testing on the final effluent. The two chronic toxicity tests listed below shall be conducted on each sample taken for effluent characterization.

Testing shall begin by August 1, 2004. Effluent testing for chronic toxicity shall be conducted biannually for one year. The Permittee shall conduct chronic toxicity testing during effluent characterization on a series of at least five concentrations of effluent in order to determine appropriate point estimates. This series of dilutions shall include the ACEC. The Permittee shall compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.

Chronic toxicity tests shall be conducted with the following two species and the most recent version of the following protocols:

Freshwater Chronic Toxicity Test Species		Method
Fathead minnow	<i>Pimephales promelas</i>	EPA/600/4-91/002
Water flea	<i>Ceriodaphnia dubia</i>	EPA/600/4-91/002

B. Effluent Limit for Chronic Toxicity

After completion of effluent characterization, the Permittee has an effluent limit for chronic toxicity if any test conducted for effluent characterization shows a significant difference between the control and the ACEC at the 0.05 level of significance using hypothesis testing (Appendix H, EPA/600/4-89/001) and shall complete all applicable requirements in subsections C, D, and F.

If no significant difference is shown between the ACEC and the control in any of the chronic toxicity tests, the Permittee has no effluent limit for chronic toxicity and only subsections E and F apply.

The effluent limit for chronic toxicity is no toxicity detected in a test concentration representing the chronic critical effluent concentration (CCEC) equal to 0.96% effluent.

In the event of failure to pass the test described in subsection C, of this section, for compliance with the effluent limit for chronic toxicity, the Permittee is considered to be in compliance with all permit requirements for chronic whole effluent toxicity as long as the requirements in subsection D are being met to the satisfaction of the Department.

The CCEC means the maximum concentration of effluent allowable at the boundary of the mixing zone assigned in Section S1.B pursuant to WAC 173-201A-100. The CCEC equals 0.96% effluent.

C. Monitoring for Compliance With an Effluent Limit for Chronic Toxicity

Monitoring to determine compliance with the effluent limit shall be conducted biannually for the remainder of the permit term using each of the species listed in subsection A above on a rotating basis and performed using at a minimum the CCEC, the ACEC, and a control. The Permittee shall schedule the toxicity tests in the order listed in the permit unless the Department notifies the Permittee in writing of another species rotation schedule.

Compliance with the effluent limit for chronic toxicity means no statistically significant difference in response between the control and the test concentration representing the CCEC. The Permittee shall immediately implement subsection D if any chronic toxicity test conducted for compliance monitoring determines a statistically significant difference in response between the control and the CCEC using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in response between the control and the CCEC is less than 20%, the hypothesis test shall be conducted at the 0.01 level of significance.

In order to establish whether the chronic toxicity limit is eligible for removal from future permits, the Permittee shall also conduct this same hypothesis test (Appendix H, EPA/600/4-89/001) to determine if a statistically significant difference in response exists between the ACEC and the control.

D. Response to Noncompliance With an Effluent Limit for Chronic Toxicity

If a toxicity test conducted for compliance monitoring under subsection C determines a statistically significant difference in response between the CCEC and the control, the Permittee shall begin additional compliance monitoring within one week from the time of receiving the test results. This additional monitoring shall be conducted monthly for three consecutive months using the same test and species as the failed compliance test. Testing shall be conducted using a series of at least five effluent concentrations and a control in order to be able to determine appropriate point estimates. One of these effluent concentrations shall equal the CCEC and be compared statistically to the nontoxic control in order to determine compliance with the effluent limit for chronic toxicity as described in subsection C. The discharger shall return to the original monitoring frequency in subsection C after completion of the additional compliance monitoring.

If the Permittee believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, the Permittee may notify the Department that the compliance test result might be anomalous and that the Permittee intends to take only one additional sample for toxicity testing and wait for notification from the Department before completing the additional monitoring required in this subsection. The notification to the Department shall accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The Permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by the Department that the compliance test result was not anomalous. If the one additional sample fails to comply with the effluent limit for chronic toxicity, then the Permittee shall proceed without delay to complete all of the

additional monitoring required in this subsection. The one additional test result shall replace the compliance test result upon determination by the Department that the compliance test result was anomalous.

If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the Permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to the Department on possible causes and preventive measures for the transient toxicity event which triggered the additional compliance monitoring.

If toxicity occurs in violation of the chronic toxicity limit during the additional compliance monitoring, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department. The TI/RE plan submittal shall be within sixty (60) days after the sample date for the third additional compliance monitoring test. If the Permittee decides to forgo the rest of the additional compliance monitoring tests required in this subsection because one of the first two additional compliance monitoring tests failed to meet the chronic toxicity limit, then the Permittee shall submit the TI/RE plan within sixty (60) days after the sample date for the first additional monitoring test to violate the chronic toxicity limit. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).

E. Monitoring When There Is No Permit Limit for Chronic Toxicity

The Permittee shall test final effluent once in the last summer and once in the last winter prior to submission of the application for permit renewal. All species used in the initial chronic effluent characterization or substitutes approved by the Department shall be used and results submitted to the Department as a part of the permit renewal application process.

F. Sampling and Reporting Requirements

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.

2. Testing shall be conducted on effluent grab samples. Composite samples taken for toxicity testing shall be cooled to 4 degrees Celsius while being collected and shall be sent to the lab immediately upon completion. Grab samples must be shipped on ice to the lab immediately upon collection. If a grab sample is received at the testing lab within one hour after collection, it must have a temperature below 20° C at receipt. If a grab sample is received at the testing lab within 4 hours after collection, it must be below 12° C at receipt. All other samples must be below 8° C at receipt. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended. The lab shall store all samples at 4° C in the dark from receipt until completion of the test.
3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version thereof.
4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in subsection A. and the Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.
5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in subsection A or pristine natural water of sufficient quality for good control performance.
6. The whole effluent toxicity tests shall be run on an unmodified sample of final effluent.
7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC and the CCEC.
8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing, and do not comply with the chronic statistical power standard of 39% as defined in WAC 173-205-020, must be repeated on a fresh sample with an increased number of replicates to increase the power.

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to the Department shall be signed and certified.

- A. All permit applications shall be signed by either a responsible corporate officer of at least the level of vice president of a corporation, a general partner of a partnership, or the proprietor of a sole proprietorship.
- B. All reports required by this permit and other information requested by the Department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - 1. The authorization is made in writing by a person described above and submitted to the Department.
 - 2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
- C. Changes to authorization. If an authorization under paragraph B.2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph B.2 above must be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.
- D. Certification. Any person signing a document under this section shall make the following certification:

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

G2. RIGHT OF INSPECTION AND ENTRY

The Permittee shall allow an authorized representative of the Department, upon the presentation of credentials and such other documents as may be required by law:

- A. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit.
- B. To have access to and copy - at reasonable times and at reasonable cost - any records required to be kept under the terms and conditions of this permit.
- C. To inspect - at reasonable times - any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.
- D. To sample or monitor - at reasonable times - any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

G3. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee) or upon the Department's initiative. However, the permit may only be modified, revoked and reissued, or terminated for the reasons specified in 40 CFR 122.62, 122.64 or WAC 173-220-150 according to the procedures of 40 CFR 124.5.

- A. The following are causes for terminating this permit during its term, or for denying a permit renewal application:
 - 1. Violation of any permit term or condition.
 - 2. Obtaining a permit by misrepresentation or failure to disclose all relevant facts.
 - 3. A material change in quantity or type of waste disposal.
 - 4. A determination that the permitted activity endangers human health or the environment or contributes to water quality standards violations and can only be regulated to acceptable levels by permit modification or termination [40 CFR part 122.64(3)].
 - 5. A change in any condition that requires either a temporary or permanent reduction or elimination of any discharge or sludge use or disposal practice controlled by the permit [40 CFR part 122.64(4)].
 - 6. Nonpayment of fees assessed pursuant to RCW 90.48.465.
 - 7. Failure or refusal of the permittee to allow entry as required in RCW 90.48.090.
- B. The following are causes for modification but not revocation and reissuance except when the permittee requests or agrees:
 - 1. A material change in the condition of the waters of the state.
 - 2. New information not available at the time of permit issuance that would have justified the application of different permit conditions.

3. Material and substantial alterations or additions to the permitted facility or activities which occurred after this permit issuance.
 4. Promulgation of new or amended standards or regulations having a direct bearing upon permit conditions, or requiring permit revision.
 5. The Permittee has requested a modification based on other rationale meeting the criteria of 40 CFR part 122.62.
 6. The Department has determined that good cause exists for modification of a compliance schedule, and the modification will not violate statutory deadlines.
 7. Incorporation of an approved local pretreatment program into a municipality's permit.
- C. The following are causes for modification or alternatively revocation and reissuance:
1. Cause exists for termination for reasons listed in A1 through A7, of this section, and the Department determines that modification or revocation and reissuance is appropriate.
 2. The Department has received notification of a proposed transfer of the permit. A permit may also be modified to reflect a transfer after the effective date of an automatic transfer (General Condition G8) but will not be revoked and reissued after the effective date of the transfer except upon the request of the new permittee.

G4. REPORTING PLANNED CHANGES

The Permittee shall, as soon as possible, but no later than sixty (60) days prior to the proposed changes, give notice to the Department of planned physical alterations or additions to the permitted facility, production increases, or process modification which will result in: 1) the permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b); 2) a significant change in the nature or an increase in quantity of pollutants discharged; or 3) a significant change in the Permittee's sludge use or disposal practices. Following such notice, and the submittal of a new application or supplement to the existing application, along with required engineering plans and reports, this permit may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation.

G5. PLAN REVIEW REQUIRED

Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications shall be submitted to the Department for approval in accordance with Chapter 173-240 WAC. Engineering reports, plans, and specifications shall be submitted at least one hundred eighty (180) days prior to the planned start of construction unless a shorter time is approved by Ecology. Facilities shall be constructed and operated in accordance with the approved plans.

G6. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit shall be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G7. DUTY TO REAPPLY

The Permittee shall apply for permit renewal at least 180 days prior to the specified expiration date of this permit.

G8. TRANSFER OF THIS PERMIT

In the event of any change in control or ownership of facilities from which the authorized discharge emanate, the Permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Department.

A. Transfers by Modification

Except as provided in paragraph B below, this permit may be transferred by the Permittee to a new owner or operator only if this permit has been modified or revoked and reissued under 40 CFR 122.62(b)(2), or a minor modification made under 40 CFR 122.63(d), to identify the new Permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

B. Automatic Transfers

This permit may be automatically transferred to a new Permittee if:

1. The Permittee notifies the Department at least 30 days in advance of the proposed transfer date.
2. The notice includes a written agreement between the existing and new Permittee's containing a specific date transfer of permit responsibility, coverage, and liability between them.
3. The Department does not notify the existing Permittee and the proposed new Permittee of its intent to modify or revoke and reissue this permit. A modification under the subparagraph may also be minor modification under 40 CFR 122.63. If this notice is not received, the transfer is effective on the date specified in the written agreement.

G9. REDUCED PRODUCTION FOR COMPLIANCE

The Permittee, in order to maintain compliance with its permit, shall control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

G10. REMOVED SUBSTANCES

Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall not be resuspended or reintroduced to the final effluent stream for discharge to state waters.

G11. DUTY TO PROVIDE INFORMATION

The Permittee shall submit to the Department, within a reasonable time, all information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also submit to the Department upon request, copies of records required to be kept by this permit.

G12. OTHER REQUIREMENTS OF 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

G13. ADDITIONAL MONITORING

The Department may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G14. PAYMENT OF FEES

The Permittee shall submit payment of fees associated with this permit as assessed by the Department.

G15. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars (\$10,000) and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars (\$10,000) for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be deemed to be a separate and distinct violation.

G16. UPSET

Definition – “Upset” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that: 1) an upset occurred and that the Permittee can identify the cause(s) of the upset; 2) the permitted facility was being properly operated at the time of the upset; 3) the Permittee submitted notice of the upset as required in condition S3.E; and 4) the Permittee complied with any remedial measures required under S4.C of this permit.

In any enforcement preceding the Permittee seeking to establish the occurrence of an upset has the burden of proof.

G17. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

G18. DUTY TO COMPLY

The Permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

G19. TOXIC POLLUTANTS

The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G20. PENALTIES FOR TAMPERING

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this Condition, punishment shall be a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or by both.

G21. REPORTING ANTICIPATED NON-COMPLIANCE

The Permittee shall give advance notice to the Department by submission of a new application or supplement thereto at least one hundred and eighty (180) days prior to commencement of such discharges, of any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility or activity which

may result in noncompliance with permit limits or conditions. Any maintenance of facilities, which might necessitate unavoidable interruption of operation and degradation of effluent quality, shall be scheduled during non-critical water quality periods and carried out in a manner approved by the Department.

G22. REPORTING OTHER INFORMATION

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

G23. REPORTING REQUIREMENTS APPLICABLE TO EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURAL DISCHARGERS

The Permittee belonging to the categories of existing manufacturing, commercial, mining, or silviculture must notify the Department as soon as they know or have reason to believe:

- A. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following “notification levels:”
 - 1. One hundred micrograms per liter (100 µg/l).
 - 2. Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony.
 - 3. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
 - 4. The level established by the Director in accordance with 40 CFR 122.44(f).
- B. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following “notification levels:”
 - 1. Five hundred micrograms per liter (500µg/L).
 - 2. One milligram per liter (1 mg/L) for antimony.
 - 3. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
 - 4. The level established by the Director in accordance with 40 CFR 122.44(f).

G24. COMPLIANCE SCHEDULES

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date.